



PATENT APPLICATION  
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Baiju Shah et al.  
Serial No.: 10/090,550  
Filing Date: March 4, 2002

Examiner: Mary Da Zhi Wang Cheung  
Art Unit: 3621  
Docket No.: 33836.00.0019

Title: **CONTENT BANK FOR OBJECTS**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

*Certificate of First Class Mailing*  
*I hereby certify that this paper is being sent via first class*  
*mail, postage prepaid, in an envelope addressed to: Mail*  
*Stop Amendment, Commissioner for Patents, P. O. Box*  
*1450, Alexandria, VA 22313-1450, on this date:*

8-31-05  
Date

Christine A. Wright  
Christine A. Wright

**INFORMATION DISCLOSURE STATEMENT**  
**IN ACCORDANCE WITH 37 CFR §§ 1.97(C) AND 1.98**

Pursuant to 37 CFR §§ 1.97(c) and 1.98, Applicants respectfully submit the following statement consisting of:

1. A list of documents; and
2. General remarks.

A copy of the listed document is enclosed herewith along with Forms PTO/SB/08A and PTO/SB/08B.

1. Documents

- a. U.S. Patent No. 5,721,911; Ha et al.; issued February 24, 1998;
- b. U.S. Patent No. 5,862,325; Reed et al.; issued January 19, 1999;
- c. U.S. Patent No. 5,941,947; Brown et al.; issued August 24, 1999;
- d. U.S. Patent No. 6,654,754; Knauff et al.; issued November 25, 2003;
- e. U.S. Patent No. 6,697,824; Bowman-Amuah; issued February 24, 2004;

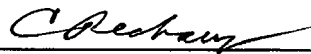
- f. U.S. Patent No. 6,721,747; Lipkin; issued April 13, 2004;
- g. U.S. Patent No. 6,732,331; Alexander; issued May 4, 2004;
- h. U.S. Patent No. 6,748,447; Basani et al.; issued June 8, 2004;
- i. U.S. Patent No. 6,751,673; Shaw; issued June 15, 2004;
- j. U.S. Publication No. 2001/0010046; Muyres et al.; published July 26, 2004;
- k. U.S. Publication No. 2002/0120501; Bell et al.; published August 29, 2002;
- l. U.S. Publication No. 2002/0161680; Tarnoff; published October 31, 2002;
- m. European Patent Application No. EP 0986010 A2; Xerox Corporation; filed August 30, 1999.
- n. "Authorization in the Digital Library: Secure Access to Services across Enterprise Boundaries"; Neil Ching et al.; IEEE; 1996; pages 110-119.
- o. "Fargo Technical Description"; Martin Fredriksson et al.; University College of Karlskrona/Ronneby; 1997; pages 1-11.
- p. "WDAI: a simple World Wide Web distributed authorization infrastructure"; Jose Kahan; Computer Networks; 1999; pages 1599-1609.
- q. "The Five Key Concepts of Jini"; Keith Edwards; June, 1999.
- r. "An Architecture for a Secure Service Discovery Service"; Steven E. Czerwinski et al.; University of California; pages 24-35; August, 1999.
- s. "InfoFlo: A Novel Communication Infrastructure for Personal Digital Assistants"; Noah J. Ternullo et al.; IEEE; pages 448-453; 2000.
- t. "Profile-based Service Browsing – A Pattern for Intelligent Service Discovery in Large Networks"; Martin Gitsels et al; Siemens AG; pages 1-3; August, 2000.
- u. "The Ninja architecture for robust Internet-scale systems and services"; Steven D. Gribble et al.; Computer Networks; pages 473-497; 2001.
- v. European Patent Office International Search Report for International Application No. PCT/US02/09102 dated November 13, 2003.

**REMARKS**

The submission of the above documents is not an admission that the information is prior art, analogous or otherwise material. It is respectfully requested that the above-listed documents be considered and made of record in the present application.

The Patent Office is hereby authorized to charge the fee of \$180.00 set forth in 37 CFR 1.17(p) to Deposit Account No. 22-0259 and is authorized to charge any additional fees required or credit any overpayments to this account. Applicants have enclosed a duplicate copy of this paper.

Respectfully submitted,

By:   
Christopher J. Reckamp  
Registration No. 34,414

Date: 8/31/05

Vedder, Price, Kaufman & Kammholz, P.C.  
222 N. LaSalle Street  
Chicago, IL 60601  
(312) 609-7500  
FAX: (312) 609-5005



3021

PATENT APPLICATION  
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Baiju Shah et al.  
Serial No.: 10/090,550  
Filing Date: March 4, 2002

Examiner: Mary Da Zhi Wang Cheung  
Art Unit: 3621  
Docket No.: 33836.00.0019

Title: **CONTENT BANK FOR OBJECTS**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

*Certificate of First Class Mailing*  
*I hereby certify that this paper is being sent via first class*  
*mail, postage prepaid, in an envelope addressed to: Mail*  
*Stop Amendment, Commissioner for Patents, P. O. Box*  
*1450, Alexandria, VA 22313-1450, on this date:*

8-31-05  
Date

Christine A. Wright  
Christine A. Wright

**INFORMATION DISCLOSURE STATEMENT**  
**IN ACCORDANCE WITH 37 CFR §§ 1.97(C) AND 1.98**

Pursuant to 37 CFR §§ 1.97(c) and 1.98, Applicants respectfully submit the following statement consisting of:

1. A list of documents; and
2. General remarks.

A copy of the listed document is enclosed herewith along with Forms PTO/SB/08A and PTO/SB/08B.

1. Documents

- a. U.S. Patent No. 5,721,911; Ha et al.; issued February 24, 1998;
- b. U.S. Patent No. 5,862,325; Reed et al.; issued January 19, 1999;
- c. U.S. Patent No. 5,941,947; Brown et al.; issued August 24, 1999;
- d. U.S. Patent No. 6,654,754; Knauff et al.; issued November 25, 2003;
- e. U.S. Patent No. 6,697,824; Bowman-Amuah; issued February 24, 2004;

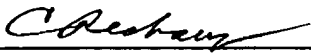
- f. U.S. Patent No. 6,721,747; Lipkin; issued April 13, 2004;
- g. U.S. Patent No. 6,732,331; Alexander; issued May 4, 2004;
- h. U.S. Patent No. 6,748,447; Basani et al.; issued June 8, 2004;
- i. U.S. Patent No. 6,751,673; Shaw; issued June 15, 2004;
- j. U.S. Publication No. 2001/0010046; Muyres et al.; published July 26, 2004;
- k. U.S. Publication No. 2002/0120501; Bell et al.; published August 29, 2002;
- l. U.S. Publication No. 2002/0161680; Tarnoff; published October 31, 2002;
- m. European Patent Application No. EP 0986010 A2; Xerox Corporation; filed August 30, 1999.
- n. "Authorization in the Digital Library: Secure Access to Services across Enterprise Boundaries"; Neil Ching et al.; IEEE; 1996; pages 110-119.
- o. "Fargo Technical Description"; Martin Fredriksson et al.; University College of Karlskrona/Ronneby; 1997; pages 1-11.
- p. "WDAI: a simple World Wide Web distributed authorization infrastructure"; Jose Kahan; Computer Networks; 1999; pages 1599-1609.
- q. "The Five Key Concepts of Jini"; Keith Edwards; June, 1999.
- r. "An Architecture for a Secure Service Discovery Service"; Steven E. Czerwinski et al.; University of California; pages 24-35; August, 1999.
- s. "InfoFlo: A Novel Communication Infrastructure for Personal Digital Assistants"; Noah J. Ternullo et al.; IEEE; pages 448-453; 2000.
- t. "Profile-based Service Browsing – A Pattern for Intelligent Service Discovery in Large Networks"; Martin Gitsels et al; Siemens AG; pages 1-3; August, 2000.
- u. "The Ninja architecture for robust Internet-scale systems and services"; Steven D. Gribble et al.; Computer Networks; pages 473-497; 2001.
- v. European Patent Office International Search Report for International Application No. PCT/US02/09102 dated November 13, 2003.

**REMARKS**

The submission of the above documents is not an admission that the information is prior art, analogous or otherwise material. It is respectfully requested that the above-listed documents be considered and made of record in the present application.

The Patent Office is hereby authorized to charge the fee of \$180.00 set forth in 37 CFR 1.17(p) to Deposit Account No. 22-0259 and is authorized to charge any additional fees required or credit any overpayments to this account. Applicants have enclosed a duplicate copy of this paper.

Respectfully submitted,

By:   
Christopher J. Reckamp  
Registration No. 34,414

Date: 8/31/05

Vedder, Price, Kaufman & Kammholz, P.C.  
222 N. LaSalle Street  
Chicago, IL 60601  
(312) 609-7500  
FAX: (312) 609-5005



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Baiju Shah et al.  
Serial No.: 10/090,550  
Filing Date: March 4, 2002  
Confirmation No.: 7097

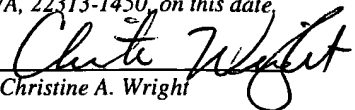
Examiner: Mary Da Zhi Wang Cheung  
Art Unit: 3621  
Docket No.: 33836.00.0019

Title: CONTENT BANK FOR OBJECTS

Mail Stop Amendment  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

*Certificate of First Class Mailing*  
*I hereby certify that this paper is being deposited with the*  
*United States Postal Service as first-class mail in an envelope*  
*addressed to: Mail Stop Amendment, Commissioner for Patents,*  
*P. O. Box 1450, Alexandria, VA, 22313-1450, on this date,*

8-31-05  
Date

  
Christine A. Wright

**AMENDMENT AND RESPONSE**

Dear Sir:

In response to the Office Action mailed May 31, 2005, Applicants submit the following amendment and remarks.

**Amendments to the Specification** begin on page 2 of this paper.

**Amendments to the Claims** are reflected in the listing of claims which begins on page 3 of this paper.

**Remarks** begin on page 18 of this paper.

### **Amendments to the Specification:**

Please replace the paragraph [0009] with the following amended paragraph:

[0009] While it is anticipated that the .NET My Services platform will represent an advance in the management of data of individuals, it fails to address the management of object-related data. Furthermore, although EPCs will likely serve well to uniquely ~~identity~~identify objects and relate them to a specific PML description of that object, they fail to ~~offering~~offer object-centric services that allow objects to interact with the world. As objects become increasingly capable of generating their own data and requesting services, the need for such object-related information management will likewise increase. Therefore, a need exists for methods and systems that provide a central point for hosting and managing object-related information as well as receiving and distributing object-related information to and from a plurality of entities.



### **Amendments to the Claims:**

Revise the claims as set forth below. This listing of claims will replace all prior versions and listings, of claims in the application:

### **Listing of Claims:**

1. (original) In a content bank system comprising at least one digital identity instance representative of at least one object, a method for adding object-related information regarding an object of the at least one object to the content bank system, the method comprising:

receiving, from a source by a digital identity instance corresponding to the object, the object-related information targeted to a service;

determining, via a services registry associated with the digital identity instance, whether the service targeted by the object-related information exists;

when the service targeted by the object-related information exists, sending the object-related information to the service; and

processing the object-related information by the service such that the object-related information is subsequently available via the content bank system.

2. (original) The method of claim 1, wherein the object-related information is received via at least one access mode of a multi-mode interface available to the digital identity instance.

3. (original) The method of claim 2, wherein the at least one access mode comprises any of: a Simple Object Access Protocol-based access mode, a voice-based mode, a text-based access mode, and an Instant Messaging-based access mode.

4. (original) The method of claim 1, further comprising:  
determining, via the services registry, location information regarding the service; and  
sending the object-related information to the service based on the location information.

5. (original) The method of claim 4, wherein the location information corresponds to another content bank system.

6. (original) The method of claim 1, wherein the source of the object-related information is any of: the object, another content bank system, another object, a manufacturer of the object, an owner of the object, and a provider of service to the object.

7. (original) The method of claim 1, further comprising:  
verifying access rights of the source to provide the object-related information associated with the object to the content bank system.

8. (currently amended) In a content bank system comprising at least one digital identity instance representative of at least one object, a method for providing object-related information regarding an object of the at least one object to a third party, the method comprising:  
determining, by a digital identity instance corresponding to the object, the object-related information should be provided to the third party;

determining, via a services registry associated with the digital identity instance, whether a service associated with the object-related information exists;

when the service ~~targeted by~~ associated with the object-related information exists, accessing the object-related information via the service; and

sending, by the service, the object-related information to the third party.

9. (original) The method of claim 8, wherein determining the need to provide the object-related information to the third party further comprises receiving a request for the object-related information from the third party, wherein the request specifies the third party as the destination for the object-related information.

10. (original) The method of claim 9, wherein the third party is any of: the object, another content bank system, another object, a manufacturer of the object, an owner of the object, and a provider of service to the object.

11. (original) The method of claim 9, wherein the request is received from the third party via at least one access mode of a multi-mode interface available to the digital identity instance.

12. (original) The method of claim 11, wherein the wherein the at least one access mode comprises any of: a Simple Object Access Protocol-based access mode, a voice-based mode, a text-based access mode, and an Instant Messaging-based access mode.

13. (original) The method of claim 8, wherein determining the need to provide the object-related information to the third party further comprises receiving a request for the object-related information from another third party, wherein the request specifies the third party as the destination for the object-related information.

14. (original) The method of claim 13, wherein the third party or the other third party is any of: the object, another content bank system, another object, a manufacturer of the object, an owner of the object, and a provider of service to the object.

15. (original) The method of claim 13, wherein the request is received from the other third party via at least one access mode of a multi-mode interface available to the digital identity instance.

16. (original) The method of claim 15, wherein the wherein the at least one access mode comprises any of: a Simple Object Access Protocol-based access mode, a voice-based mode, a text-based access mode, and an Instant Messaging-based access mode.

17. (original) The method of claim 8, wherein determining the need to provide the object-related information to the third party further comprises detecting a condition requiring the object-related information to be pushed to the third party.

18. (original) The method of claim 17, further comprising:

receiving, by the digital identity instance from the third party, a subscription request for the object-related information,

wherein the object-related information is pushed to only those third parties that have submitted a subscription request.

19. (original) The method of claim 8, further comprising:  
determining, via the services registry, location information regarding the service; and  
accessing the object-related information via the service based on the location information.

20. (original) The method of claim 19, wherein the location information corresponds to another content bank system.

21. (original) The method of claim 8, further comprising:  
verifying access rights of the third party to the object-related information; and  
sending the additional object-related information to the third party when the third party possesses access rights to the object-related information.

22. (original) The method of claim 8, further comprising:  
prior to sending the object-related information to the third party, processing the object-related information into a form suitable for sending the object-related information to the third party.

23. (original) The method of claim 8, wherein the object-related information comprises a pointer to additional object-related information.

24. (withdrawn) In a content bank system comprising at least one digital identity instance representative of at least one object, a method for manipulating object-related information regarding an object of the at least one object, the method comprising:

determining, via a services registry associated with a digital identity instance corresponding to the object, whether a service associated with the object-related information exist;

when the service associated with the object-related information exists, accessing the object-related information via the service;

modifying the object-related information to provide modified object-related information;  
and

sending the modified object-related information to the service such that the modified object-related information is subsequently available via the content bank system.

25. (withdrawn) The method of claim 24, further comprising:  
determining, via the services registry, location information regarding the service;  
accessing the object-related information via the service based on the location information; and  
sending the modified object-related information to the service based on the location information.

26. (withdrawn) The method of claim 25, wherein the location information corresponds to another content bank system.

27. (withdrawn) In a content bank system comprising at least one digital identity instance representative of at least one object, a method for communicating with an object of the at least one object, the method comprising:

establishing a first communication channel between the object and a digital identity instance within the content bank system corresponding to the object;

establishing, via at least one access mode of a multi-mode interface, a second communication channel between a third party and the digital identity instance; and

communicating, by the third party via the first and second communication channels and the digital identity instance, with the object.

28. (withdrawn) The method of claim 27, wherein the at least one access mode comprises any of: a Simple Object Access Protocol-based access mode, a voice-based mode, a text-based access mode, and an Instant Messaging-based access mode.

29. (withdrawn) The method of claim 27, wherein communicating with the object further comprises:

receiving, at the content bank system, first object-related information from the object;

sending, by the content bank system, the first object-related information to the third party;

receiving, by the content bank system, second object-related information from the third party in response to the first object-related information; and

sending, by the content bank system, the second object related information to the object.

30. (withdrawn) The method of claim 27, wherein communicating with the object further comprises:

receiving, at the content bank system, first object-related information from the third party;

sending, by the content bank system, the first object-related information to the object;

receiving, by the content bank system, second object-related information from the object in response to the first object-related information; and

sending, by the content bank system, the second object related information to the third party.

31. (withdrawn) The method of claim 27, wherein communicating with the object further comprises:

verifying access rights of the third party to provide object-related information associated with the object to the content bank system.

32. (withdrawn) The method of claim 27, wherein communicating with the object further comprises:

verifying access rights of the third party to receive object-related information associated with the object from the content bank system.

33. (withdrawn) The method of claim 27, wherein the third party is any of: the object, another content bank system, another object, a manufacturer of the object, an owner of the object, and a provider of service to the object.

34. (withdrawn) In a content bank system comprising at least one digital identity instance representative of at least one object, a method of associating contextual information with discrete components of object-related information, the method comprising:

accessing, by a digital identity instance associated with an object, a first discrete component of object-related information from a first data source; and

adding, by the digital identity instance, object-specific contextual information to the first discrete component of object-related information to provide first enhanced object data.

35. (withdrawn) The method of claim 34, wherein accessing the first discrete component of object-related data further comprises receiving at least one attribute of the object.

36. (withdrawn) The method of claim 34, wherein the first data source is any of: the object, another content bank system, another object, a manufacturer of the object, an owner of the object, and a provider of service to the object.

37. (withdrawn) The method of claim 34, further comprising:  
assigning, by the digital identity instance, access rights to the first enhanced object data.

38. (withdrawn) The method of claim 34, further comprising:  
assigning, by the digital identity instance, usage rules to the first enhanced object data.

39. (withdrawn) The method of claim 34, further comprising:  
encoding, by the digital identity instance, the first enhanced object data with a standardized markup language.

40. (withdrawn) The method of claim 39, wherein the markup language comprises Extensible Markup Language.

41. (withdrawn) The method of claim 34, further comprising:  
accessing a second discrete component of object-related information from a second data source;

adding, by the digital identity instance, object-specific contextual information to the second discrete component of object-related information to provide second enhanced object data;  
and

aggregating, by the digital identity instance, the first enhanced object data and the second enhanced object data according to at least one aggregation rule to provide aggregated data.

42. (withdrawn) The method of claim 41, further comprising:  
sending, by the digital identity instance, the aggregated data to at least one third party.

43. (original) A content bank system comprising at least one digital identity instance representative of at least one object device, the system comprising:

at least one processor; and

memory, coupled to the at least one processor, comprising computer-executable instructions that, when executed by the at least one processor, cause the at least one processor to:

receive, from a source by a digital identity instance corresponding to an object, object-related information targeted to a service;

determine, via a services registry associated with the digital identity instance, whether the service targeted by the object-related information exists;

send the object-related information to the service when the service targeted by the object-related information exists; and

process the object-related information by the service such that the object-related information is subsequently available via the content bank system.

44. (original) The system of claim 43, wherein the memory further comprises computer-executable instructions that, when executed by the at least one processor, cause the at least one processor to:

determine, via the services registry, location information regarding the service; and



send the object-related information to the service based on the location information.

45. (original) The system of claim 43, wherein the memory further comprises computer-executable instructions that, when executed by the at least one processor, cause the at least one processor to:

verify access rights of the source to provide the object-related information associated with the object to the content bank system.

46. (currently amended) A content bank system comprising at least one digital identity instance representative of at least one object device, the system comprising:

at least one processor; and

memory, coupled to the at least one processor, comprising computer-executable instructions that, when executed by the at least one processor, cause the at least one processor to:

determining, by a digital identity instance corresponding to the object, the need to provide the object-related information to the third party;

determining, via a services registry associated with the digital identity instance, whether a service associated with the object-related information exists;

when the service ~~targeted by~~ associated with the object-related information exists, accessing the object-related information via the service; and

sending, by the service, the object-related information to the third party.

47. (original) The system of claim 46, wherein the memory further comprises computer-executable instructions that, when executed by the at least one processor, cause the at least one processor to:

receive a request for the object-related information from the third party, wherein the request specifies the third party as the destination for the object-related information.

48. (original) The system of claim 46, wherein the memory further comprises computer-executable instructions that, when executed by the at least one processor, cause the at least one processor to:

receive a request for the object-related information from another third party, wherein the request specifies the third party as the destination for the object-related information.

49. (original) The system of claim 46, wherein the memory further comprises computer-executable instructions that, when executed by the at least one processor, cause the at least one processor to:

detect a condition requiring the object-related information to be pushed to the third party.

50. (original) The system of claim 46, wherein the memory further comprises computer-executable instructions that, when executed by the at least one processor, cause the at least one processor to:

determine, via the services registry, location information regarding the service; and  
access the object-related information via the service based on the location information.

51. (original) The system of claim 46, wherein the memory further comprises computer-executable instructions that, when executed by the at least one processor, cause the at least one processor to:

verify access rights of the third party to the object-related information; and  
send the additional object-related information to the third party when the third party possesses access rights to the object-related information.

52. (withdrawn) A content bank system comprising at least one digital identity instance representative of at least one object device, the system comprising:

at least one processor; and  
memory, coupled to the at least one processor, comprising computer-executable instructions that, when executed by the at least one processor, cause the at least one processor to:  
determine, via a services registry associated with a digital identity instance corresponding to an object, whether a service associated with object-related information exist;  
access the object-related information via the service when the service associated with the object-related information exists;  
modify the object-related information to provide modified object-related information; and

send the modified object-related information to the service such that the modified object-related information is subsequently available via the content bank system.

53. (withdrawn) The system of claim 52, wherein the memory further comprises computer-executable instructions that, when executed by the at least one processor, cause the at least one processor to:

determine, via the services registry, location information regarding the service;

access the object-related information via the service based on the location information;

and

send the modified object-related information to the service based on the location information.

54. (withdrawn) A content bank system comprising at least one digital identity instance representative of at least one object device, the system comprising:

at least one processor; and

memory, coupled to the at least one processor, comprising computer-executable instructions that, when executed by the at least one processor, cause the at least one processor to:

establish a first communication channel between an object and a digital identity instance within the content bank system corresponding to the object; and

establish, via at least one access mode of a multi-mode interface, a second communication channel between a third party and the digital identity instance,

wherein the third party communicates with the object via the content bank system and the first and second communication channels.

55. (withdrawn) The system of claim 54, wherein the memory further comprises computer-executable instructions that, when executed by the at least one processor, cause the at least one processor to:

verify access rights of the third party to provide object-related information associated with the object to the content bank system.

56. (withdrawn) The system of claim 54, wherein the memory further comprises computer-executable instructions that, when executed by the at least one processor, cause the at least one processor to:

verify access rights of the third party to receive object-related information associated with the object from the content bank system.

57. (withdrawn) A content bank system comprising at least one digital identity instance representative of at least one object device, the system comprising:

at least one processor; and

memory, coupled to the at least one processor, comprising computer-executable instructions that, when executed by the at least one processor, cause the at least one processor to:

access, by a digital identity instance associated with an object, a first discrete component of object-related information from a first data source; and

add, by the digital identity instance, object-specific contextual information to the first discrete component of object-related information to provide first enhanced object data.

58. (withdrawn) The system of claim 57, wherein the memory further comprises computer-executable instructions that, when executed by the at least one processor, cause the at least one processor to:

assign, by the digital identity instance, access rights to the first enhanced object data.

59. (withdrawn) The system of claim 57, wherein the memory further comprises computer-executable instructions that, when executed by the at least one processor, cause the at least one processor to:

assign, by the digital identity instance, usage rules to the first enhanced object data.

60. (withdrawn) The system of claim 57, wherein the memory further comprises computer-executable instructions that, when executed by the at least one processor, cause the at least one processor to:

encode, by the digital identity instance, the first enhanced object data with a standardized markup language.

61. (withdrawn) The system of claim 57, wherein the memory further comprises computer-executable instructions that, when executed by the at least one processor, cause the at least one processor to:

- access a second discrete component of object-related information from a second data source;

- add, by the digital identity instance, object-specific contextual information to the second discrete component of object-related information to provide second enhanced object data; and

- aggregate, by the digital identity instance, the first enhanced object data and the second enhanced object data according to at least one aggregation rule to provide aggregated data.

62. (withdrawn) The system of claim 61, wherein the memory further comprises computer-executable instructions that, when executed by the at least one processor, cause the at least one processor to:

- send, by the digital identity instance, the aggregated data to at least one third party.

63. (withdrawn) A computer-implemented content bank system for use in processing object-related information regarding at least one object, comprising:

- at least one identity module that, when invoked, provides a digital identity instance corresponding to an object; and

- at least one content module that, when invoked by the digital identity instance, processes object-related information associated with the object.

64. (withdrawn) The system of claim 63, wherein the at least one identity module comprises a service registry module that administers a listing of all services available to the digital identity instance.

65. (withdrawn) The system of claim 63, wherein the at least one identity module comprises a profile module that administers information descriptive of the object.

66. (withdrawn) The system of claim 63, wherein the at least one identity module comprises a usage module that administers information regarding usage of the object.

67. (withdrawn) The system of claim 63, wherein the at least one identity module comprises a maintenance module that administers information regarding maintenance operations performed on the object.

68. (withdrawn) The system of claim 63, wherein the at least one identity module comprises a health module that administers information regarding condition of the object.

69. (withdrawn) The system of claim 63, wherein the at least one identity module comprises a location module that administers information regarding a location of the object.

70. (withdrawn) The system of claim 63, wherein the at least one identity module comprises a schedule module that administers information regarding future assignments of the object.

71. (withdrawn) The system of claim 63, wherein the at least one identity module comprises a family module that administers information regarding relationships between the object and other objects.

72. (withdrawn) The system of claim 63, wherein the at least one identity module comprises a security module that administers information regarding any of: data sharing rules, user rules and access rights.

73. (withdrawn) The system of claim 63, wherein the at least one identity module comprises an alerts module that administers communication between modules of the at least one identity module.

74. (withdrawn) The system of claim 73, wherein the alerts module administers communications between the digital identity instance and third parties external to the content bank system.

75. (withdrawn) The system of claim 63, wherein the at least one content module comprises a translation module for converting the object-related information to a common representation format.

76. (withdrawn) The system of claim 63, wherein the at least one content module comprises a rendering module for determining a format for sending the object-related information to a third party.

77. (withdrawn) The system of claim 63, wherein the at least one content module comprises a transformation module for adding contextual information to the object-related information.

78. (withdrawn) The system of claim 63, wherein the at least one content module comprises an aggregation module that aggregates the object-related information with other object-related information corresponding to other objects.

## **REMARKS**

Applicants respectfully traverse and request reconsideration.

Claims 1-23 and 43-51 stand rejected under 35 U.S.C. §102(e) as being anticipated by Fera et al. (WO 01/015001A2). The Fera reference is directed to an apparatus and method for managing a fleet of mobile assets such as trains or other vehicles. Fera describes a system that utilizes, for example, locomotive fault detection sensors that are onboard the locomotive and a communication system which allows the downloading of the fault information from the sensors through a data link to a data center. (See for example page 5). A web based system utilizes multiple web pages that are updated to reflect the performance reports, operating statistics of the locomotive, current location map for the fleet of mobile assets, and other information. The Fera reference uses the word “service” in the cited portions (for example, pages 5, 9, 14), to refer to maintenance service of the vehicle. It appears that the use of the words “services registry” in the claim and the use of the word “service” in the claim may have been misapprehended.

For example, as to claim 1, the office action cites page 9, lines 6-8 as teaching the step of determining, via a services registry associated with the digital identity instance of an object, whether the service targeted by the object related information exists. Such a services registry is described, for example, in Applicants’ specification in paragraph 41 and elsewhere which describes, for example, a services module that serves as a registry for other modules. The services registry shows what modules are available for an object and where those modules reside. For example, for a given instance of a service module on behalf on an object, the service module includes a registry that, for example, lists all the modules that may be accessed by the object or third parties and where to find those modules. As such, Applicants’ claim is not referring to maintenance service. Claim 1 is directed to a completely different aspect of the invention and is directed to, among other things, the services registry and sending object related



information to appropriate service, such as a service module. In contrast, the cited portions of the reference all seem to refer to the maintenance service of a locomotive which is different from the subject matter being claimed. Applicants' specification does however describe a service network 206 that may contain information such as part information, common problems, repair costs estimates and other information that may be relevant to the maintenance servicing of an object, such as a bus, however, this services network is not the services registry being claimed in claim 1. Since the cited portions do not recite the claimed subject matter, Applicants respectfully submit that this claim is in condition for allowance.

Applicants respectfully submit that the dependent claims add additional novel and non-obvious subject matter. For example, claim 4 requires, among other things, determining, via the services registry, location information regarding the service and sending the object related information to the service based on the location information. This claimed subject matter is referring to the location of where the service may be found, such as a uniform resource identifier or other information identifying where a service may be located in the network system. In contrast, the cited portion actually refers to maintenance facilities and the "maintenance servicing" of a vehicle. Again, the use of the word "service" or "services" appears to be misapprehended in the rejection. Accordingly, this claim is also in condition for allowance. In addition, and by way of further example, claim 5 actually requires that the location information of claim 4 corresponds to another content bank system. The cited portion of the office action again refers to instructing a human operator at a monitoring station as to whether to correct the fault prior to a scheduled maintenance of the vehicle, when to correct the fault, what fault to correct, etc., and does not describe the services registry or location information that corresponds to a content bank system as claimed. Accordingly, this claim is also in condition for allowance.

As to claim 8, Applicants respectfully reassert the relevant remarks made with respect to claim 1, and as such, this claim is also in condition for allowance. The dependent claims 9-23 are also in condition for allowance as adding additional novel and non-obvious subject matter and as at least depending from an allowable base claim.

Claim 43 is directed to a content bank system that includes at least one processor and memory that includes executable instructions that, when read by the one or more processors, cause the one or more processors to perform operations, for example, set forth in claim 1. As such, Applicants respectfully reassert the relevant remarks with respect to claim 1. Accordingly, this claim is also in condition for allowance. The dependent claims add additional novel and non-obvious subject matter.

As to claims 46-51, Applicants again respectfully reassert the relevant remarks made above with respect to claim 1 as this claim also utilizes the services registry and determination of whether the service associated with the object related information exists as previously described. As such, these claims are also in condition for allowance.

Applicants respectfully submit that the claims are in condition for allowance and respectfully request that a timely Notice of Allowance be issued in this case. The Examiner is invited to contact the below listed attorney if the Examiner believes that a telephone conference will advance the prosecution of this application.

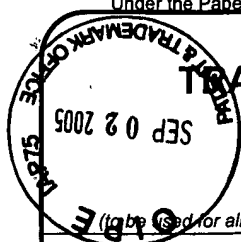
Respectfully submitted,

Date: 2/31/05

By: C. Reckamp  
Christopher J. Reckamp  
Registration No. 34,414

Vedder, Price, Kaufman & Kammholz, P.C.  
222 N. LaSalle Street  
Chicago, Illinois 60601  
Phone: (312) 609-7599  
Fax: (312) 609-5005

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL  
FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number	10/090,550
Filing Date	March 4, 2002
First Named Inventor	Baiju Shah
Art Unit	3621
Examiner Name	Mary Da Zhi Wang Cheung
Attorney Docket Number	33836.00.0019

## ENCLOSURES (Check all that apply)

<input type="checkbox"/> Fee Transmittal Form <input checked="" type="checkbox"/> Fee Attached <input checked="" type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Information Disclosure Statement  <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/ Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation <input type="checkbox"/> Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): -IDS Cover Sheet -copy of references (10) -return postcard
Remarks _____		

## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Vedder, Price, Kaufman & Kammholz, P.C.		
Signature			
Printed name	Christopher J. Reckamp		
Date	August 31, 2005	Reg. No.	34,414

## CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature			
Typed or printed name	Christine A. Wright	Date	August 31, 2005

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 1 of 2

**Complete if Known**

Application Number	10/090,550
Filing Date	March 4, 2002
First Named Inventor	Baiju Shah
Art Unit	3621
Examiner Name	Mary Da Zhi Wang Cheung
Attorney Docket Number	33836.00.0019

**U. S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
		US- 5,721,911	02-24-1998	Ha et al.	
		US- 5,862,325	01-19-1999	Reed et al.	
		US- 5,941,947	08-24-1999	Brown et al.	
		US- 6,654,754	11-25-2003	Knauft et al.	
		US- 6,697,824	02-24-2004	Bowman-Amuah	
		US- 6,721,747	04-13-2004	Lipkin	
		US- 6,732,331	05-04-2004	Alexander	
		US- 6,748,447	06-08-2004	Basani et al.	
		US- 6,751,673	06-15-2004	Shaw	
		US- 2001/0010046	07-26-2001	Muyres et al.	
		US- 2002/0120501	08-29-2002	Bell et al.	
		US- 2002/0161680	10-31-2002	Tarnoff	
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				
		EP 0986010 A2	03-15-2000	Xerox Corporation		

Examiner  
SignatureDate  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

**Complete if Known**

Application Number	10/090,550
Filing Date	March 4, 2002
First Named Inventor	Baiju Shah
Art Unit	3621
Examiner Name	Mary Da Zhi Wang Cheung
Attorney Docket Number	33836.00.0019

Sheet 2

of

2

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		EUROPEAN PATENT OFFICE; International Search Report for International Application No. PCT/US02/09102; dated November 13, 2003; pages 1-11.	
		CHING, Neil et al.; "Authorization in the Digital Library: Secure Access to Services across Enterprise Boundaries"; IEEE; 1996; pages 110-119.	
		FREDRIKSSON, Martin et al.; "Fargo Technical Description"; University College of Karlskrona/Ronneby; 1997; pages 1-11.	
		KAHAN, Jose; "WDAI: a simple World Wide Web distributed authorization infrastructure"; Computer Networks; 1999; pages 1599-1609.	
		EDWARDS, Keith; "The Five Key Concepts of Jini"; June, 1999.	
		CZERWINSKI, Steven E. et al.; "An Architecture for a Secure Service Discovery Service"; University of California; pages 24-35; August, 1999.	
		TERNULLO, Noah et al.; "InfoFlo: A Novel Communication Infrastructure for Personal Digital Assistants"; IEEE; pages 448-453; 2000.	
		GITSELS, Martin et al.; "Profile-based Service Browsing - A Pattern for Intelligent Service Discovery in Large Networks"; Siemens AG; pages 1-3; August, 2000.	
		GRIBBLE, Steven D. et al.; "The Ninja architecture for robust Internet-scale systems and services"; Computer Networks; pages 473-497; 2001.	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.